

# THE DECLINE IN THE BIRTH-RATE

## A Study of the Biological Effects of Emancipation of the Peasants

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**T**HIS study may begin appropriately by an examination of the following table, modified from Woytinsky's *Welt in Zahlen*.

diminish. It is not surprising that the statistics for France do not show these conditions with equal clarity. During the French revolution, and the subsequent Napoleonic

TABLE I  
INCREASE OF POPULATION PER 1,000 INHABITANTS

State	Peasants Emanci- pation	1810- 1820	1820- 1830	1830- 1840	1840- 1850	1850- 1860	1860- 1870	1870- 1880	1880- 1890	1890- 1900	1900- 1910
Russia ...	1861	—	70	72	50	40	105	130	140	—	—
Germany ...	1807	148	112	111	80	64	78	137	74	134	151
Great Britain ...	—	171	150	113	25	56	88	108	109	115	95
France ...	1789	47	69	51	45	27	7	11	37	17	20

Had the figures in this table increased after 1810, they could not have been used for the present purpose, because the increase might have been due to advances in sanitation and general hygiene. Since, however, they decrease rapidly, they can only represent a considerable decline in the birth-rate. This fact is of extraordinary importance. For the environmental influences now generally recognized by scientists as dominating factors in producing the decline in the birth-rate certainly did not exist in the first half of the nineteenth century. So we see that environmental influences are not the essential cause of the fall in the birth-rate; they are only of secondary importance.

Table I shows that to account for this phenomenon we must look for hereditary factors and link them up with the emancipation of the peasants. We see that, in Germany and Russia, this emancipation was followed by an exceptionally large increase in population, which gradually diminished again during the following five or six decades. From that time the record fertility of the Russian people begins to

wars, France undoubtedly suffered much greater losses of life than all her enemies. These losses of marriageable men were bound to lower the birth-rate in France more than in the enemy countries. Besides, in Table I the figures for France only begin with the third decade after the peasants' emancipation. Thus, the biological consequence of the liberation of the peasants—namely, an increase in population—is not shown to the same extent in France as in Germany; the table, however, indicates quite clearly the second stage of the gradual decrease in population up to the year 1870.

### CONDITIONS IN ENGLAND

It seems contradictory to this principle that at this period England had by far the largest increase in population, though there was no actual emancipation of her peasants. The explanation is that the important factor in the course of the above-mentioned events is not peasant emancipation itself, but the fact that this new freedom means a sudden abolition of century-old restrictions, and opens to the masses of the people new

possibilities for educational development and thus brings about many readjustments in social strata. The biological benefits accruing from the emancipation of the peasants are a result of these social changes. Of course, similar biological consequences may ensue if a race is submitted to analogous social changes of the same importance, but arising from different causes. As a matter of fact, changes of the same kind have occurred in England. In 1769, Watt invented the steam-engine, Arkwright the spinning-jenny and the power-loom; Adam Smith expounded his new economic theory on the free development and movement of men as the main source of wealth in a State. During this period of industrialization, the majority of independent craftsmen, small traders and manufacturers were economically ruined. Thus England, too, at the beginning of the nineteenth century, experienced widespread social changes. Besides which, during the Napoleonic wars, the losses of life suffered by England were by far the smallest of all the nations concerned. Hence it is not surprising that we find, as a biological result of all these happenings, that after the Napoleonic wars it was in England that the greatest increase in fertility and in population took place.

## RUSSIA

In Russia, similar though less widespread changes occurred as a result of the Napoleonic wars, and especially of the Continental blockade. These led to economic ruin and the social decline of numerous families; and inevitably the families so affected were mainly those with many children. This brought about an increase in fertility. But as Russia was an agricultural country, only smaller sections of the Russian people (those employed in trade and industry) were involved in these changes. Thus Table I shows us that the increase in the birth-rate after the Napoleonic wars in Russia was not nearly so large as in England or as in Russia itself after the peasants' emancipation, which, occurring in an agricultural country, affected a greater number of people.

At the same time, the same economic and biological forces were at work. In Russia,

as in Germany, freedom was only granted to the peasants in consideration of large monetary payments. When the head of a household died, his children generally decided to sell the estate in order to avoid a forced sale. Much of the estate was mortgaged, and the necessity to sell put the vendors at a serious disadvantage. The descendants of these families, being thus left without any means, had either to become agricultural labourers or to migrate to the towns. As the towns were not in a position to absorb all the newcomers, wages were consequently lowered. This social upheaval had the effect of bringing together the urban proletariat and the bulk of the descendants of families with many children. In this way the industrial proletariat was enriched with highly fertile elements, and consequently proletarian couples were liable to have more children than before the peasants' emancipation. Of necessity these changes meant an increase in fertility over the whole nation.

## FLUCTUATIONS IN JAPANESE FERTILITY

It is interesting to note the fluctuations in fertility amongst the Japanese people. In a paper on Haushofer's *Japan*, Kara Lenz writes\*: "For centuries her population remained between 26 and 33 millions." Since the restoration of 1871, however, her population has doubled and now amounts to 65 millions. The exact figures are shown in Table II, also taken from *Welt in Zahlen*.

TABLE II  
BIRTH-RATES PER 1,000 INHABITANTS IN JAPAN

Period	Per 1000	Period	Per 1000
1870-1880 ...	25.1	1917 ...	32.4
1881-1890 ...	27.1	1918 ...	32.2
1891-1900 ...	29.8	1919 ...	31.6
1901-1910 ...	32.4	1920 ...	36.2
1911-1916 ...	33.5	1921 ...	35.1
1916 ...	32.7		

It seems that the fluctuations in fertility were altogether different from ours; in fact, they took the reverse course. If the theory

\* *Archiv für Rassenhygiene*, Vol. XXVII, p. 4.

that the decrease in the birth-rate depends on environmental influences is right, the greater increase in population in Japan should be due to more favourable conditions. As a matter of fact, many writers have strongly maintained that the conditions were more favourable. They have stated that it is the right spiritual attitude of the people, industrialization, adherence to religion and ancestor worship that are the causes of the rise in the birth-rate in Japan. It is not, however, a sufficient explanation to talk of a right or wrong spiritual attitude. Actually, this explanation implies, in other words, a favourable or unfavourable set of conditions. As far as industrialization is concerned, it undoubtedly exists to-day, but it did not exist at the time of the sudden increase in fertility in Japan. Woytinsky states that in 1922 private enterprises of a factory type (counting only those with at least five employees) gave employment to 2,225,760 persons. But, as in 1922, Japan already had over 50 million inhabitants, it is inconceivable that such a relatively small portion of the population could have brought about such important changes in the birth-rate of the whole people. Moreover, the sharp rise had taken place thirty years before, at a time when the industrial population was considerably smaller.

The adherence to religion, morals and ancestor-worship, on the other hand, might be quite a plausible explanation. In *Our Fatherland Japan*, Inazo Nitobe writes that the spiritual attitude of the Japanese did not change for centuries. Undoubtedly this attitude is more conducive to having large families than the German. But if one considered it the main reason for the sudden increase in fertility after 1871, the question arises at once: why, with the same spiritual attitude prevailing for centuries, was the fertility of the Japanese people in past centuries so low that the population hardly increased at all? Thus, religion alone cannot suffice to explain satisfactorily the sudden increase in fertility. On the other hand, the assumption that this increase was due to hereditary factors at once leads to a thorough understanding of the process.

## FERTILITY AND ECONOMIC STATUS

The Tokugawas had gained supreme power as Shoguns. The Mikado thus held only a secondary position. In 1868, the Shoguns were overthrown and the power of the Mikado was restored. From the reign of the Tokugawas originated a class of approximately two million noblemen, called Samurai, who began to dominate the cultural life of Japan. In the restoration of 1871, the privileges of the aristocracy were abolished. "The large number of minor Samurai lost their privileged position. In order to avoid disturbances, pensions had to be paid to many among their number, and the State had to support 400,000 families." (Krause.) The same author states: "All class differences as well as slavery were abolished, and marriage restrictions for the lower and upper classes were rescinded. A complete and general equality of individuals was established in Japan."

Naturally, for the social ascendancy of the nobility a certain amount of initial working capital was required. At all times this could be accumulated most easily in families with few children. It follows that, mainly from the start, the descendants of such families—namely, not very fertile elements—were able to rise in the social scale. On the other hand, noble families with many children were losing chances of accumulating the necessary initial capital. Their descendants were often forced into a lower social class. The aristocracy was incessantly losing descendants of large families, that means highly fertile elements.

That this really happened in Japanese history cannot be shown directly in figures, but can be seen in the Japanese Laws. In *Our Fatherland Japan*, Nobuschige Hozumi reports that by 1615 many noble families had already died out in consequence of the strict administration of the Adoption Laws. These Laws caused so much disaffection that they were frequently revised till the end of the rule of the Tokugawa Shoguns. That shows that the extinction of noble families was not an infrequent, but, on the contrary, a very common, event. According to Yamamoto Genshichiro: "Sons of rich families were only adopted by leading Hatamoto families

because of their money." At the time of the Tokugawa the Japanese aristocracy, because of its low fertility, was continually filling the gaps in its ranks with sons of rich families who, themselves, were generally not very fertile. From all this we can conclude that there has been a very low fertility among the Japanese aristocracy, at least since 1600.

### THE ARGUMENT APPLIED TO GERMANY

Needless to say, the existence of such a numerous but not fertile aristocracy must affect the qualities of a nation. Take, again, for a moment, the case of Germany. All over the country the houses of the nobility were close to the dwellings of the serfs. Inevitably this led to extra-marital sexual relations between the noblemen and the daughters of the serfs (*jus primæ noctis*) which resulted in numerous pregnancies. The descendants of such relationships inherited half of their qualities from the fathers; and as these fathers usually combined more than the average intelligence with a disinclination to have many children, these irregular relationships resulted in an improvement of the whole race, but at the same time in damping down the fertility of the lower classes. The illegitimate children joined the ranks of the lower classes and passed on the qualities of their fathers. Generally speaking, persons with a high fertility are born only if both parents are highly fertile. Therefore, not only must the children of the less fertile nobility have been relatively infertile, but also the descendants of these illegitimate children. The outcome of all these separate factors must again have been a decline in the fertility of the lower classes. The more frequently tendencies towards low fertility were in this way introduced into the lower classes, the more would their fertility be decreased. If, in a peasant society with a primitive non-capitalistic economic system, these sexual relations with a relatively infertile noble class did not exist, the highly fertile elements, because of their quicker increase, would very soon outnumber those less fertile in the rural population. The consequences would be an excessive growth of fertility, as has been observed

among the Boers, the French-Canadians, and the American and Russian Mennonites up till about 1870.

The irregular sexual relations of the less fertile nobility with the lower classes of the population had made themselves felt very considerably in former centuries in Germany. The German population had just about doubled during the nineteenth century. Had the increase been the same during former centuries, the German population about 1300 would have amounted to only 800,000, which is certainly wrong. Thus, the increase of the German population after 1800 was far higher than before and occurred, as shown in Table I, mainly after the peasants' emancipation. As the standard of general hygiene was not much higher at the beginning of the last century than it was before 1800, all attempts to explain this change in fertility about 1800 with the change in infant mortality and deaths from epidemics must fail. Furthermore, all the environmental influences nowadays regarded as an explanation did not exist at that time; so there remains only one explanation, that is, *hereditary influences*, and more specifically, the decrease of fertility caused by the illicit relationships between the less fertile nobility and the lower classes.

### THE ANALOGY WITH JAPAN

This factor has operated still more powerfully in Japan. The Japanese population was practically the same size as that of Germany, but the Japanese nobility was much more numerous than the German. There were two million Samurai, and certainly the sexual desires of Japanese men were not different from those of Germans. This is borne out by the existence of the geishas, and further by complaints about the brutality and immorality during the time of the Samurai, and the abolition of marriage restrictions between higher and lower classes during the restoration. Baron Suyematsu admits all this frankly when writing in *Our Fatherland Japan* about matrimonial fidelity. Now the increase in population in Japan was very slow before the restoration. The average number of children per family reaching

adult age must have amounted to just over three. Thus, the Japanese population of thirty million must have consisted of about six million families. Of these six million fathers, two million were Samurai; in other words, every third Japanese man was an aristocrat. In view of these figures it has to be admitted that the existence of such a powerful aristocracy, selected from among the people because of its low fertility, was really the fundamental factor in decreasing the fertility of the whole Japanese people. Even if only a proportion of the Samurai in every generation had illegitimate children, there would pass into the lower classes the disinclination to produce a large family. By making all citizens equal in the eyes of the law, these relations were stopped at once and almost entirely. At the same time two classes developed amongst the agricultural population of Japan: (1) the landowners, and (2) the landless tenants (see Tables III and IV below).

Before the restoration nearly all the land was owned by the nobility, but worked by peasants who rented it. By 1911—according to Table III—the land was almost exclusively owned by small proprietors who farmed it themselves, or rented it to tenants. These

farms were very small and were worked by hand, so that the descendants of families with many children were still able to compete and thus to marry. Naturally, the possessing classes were now marrying in their own class, and in consequence the landless people had to do the same. These marriage relationships, however, were more favourable to the fertility of the country as a whole. The same social forces were at work as in Germany, and had made the possessing classes a selection of relatively infertile elements, and the landless classes a selection of highly fertile elements. Partly as a consequence of these changes, and partly because the effect of the Samurai in decreasing fertility had also disappeared, a remarkable increase in general fertility was due to take place after the restoration.

### SUMMARY

The reason of the decrease in the birth-rate is the following: After the peasants' emancipation a few outstanding persons formed the advance guard in raising the status of the intelligent sections of the lower classes. In this struggle for superiority naturally all weapons were employed which seemed at all

TABLE III  
THE DISTRIBUTION OF LANDED PROPERTY IN JAPAN

Year	Number of landed proprietors	Less than 0.5 Tscho*	0.5-1 Tscho	1-3 Tscho	3-5 Tscho	5-10 Tscho	10-50 Tscho	More than 50 Tscho
1911 ...	4,903,866	2,322,938	1,258,649	883,775	267,173	126,912	41,500	2,919
1916 ...	4,858,829	2,362,114	1,192,103	884,943	254,460	120,346	41,382	3,481
1921 ...	4,852,692	2,395,984	1,174,276	879,785	228,748	121,695	47,927	4,277

TABLE IV  
THE NUMBER OF PRIVATELY OWNED AND RENTED FARMS IN JAPAN

Year	Number of farms	In thousands			In per cent.		
		Privately owned	Rented	Partly privately owned and partly rented	Privately owned	Rented	Partly privately owned and partly rented
1911 ...	5,420	1,762	1,502	2,156	32.5	27.7	39.8
1916 ...	5,458	1,696	1,525	2,237	31.1	27.9	41.0
1921 ...	5,456	1,669	1,555	2,232	30.6	28.5	40.9

\* 1 Tscho = 0.99 Hektare.

suitable for the desired purpose: not only intelligence, diligence and thrift, but also—which proved to be very successful—restriction of the number of children. This last factor increased in importance with the increasing need for capital as well as intelligence as an aid to rising in the social scale. In the first generations, of course, there were still a number of very large families in the higher classes. But as the cost of education increased, these families were economically ruined, and these fertile elements were gradually eliminated from the higher classes. In consequence, the lowest social class contained the greatest number of highly fertile elements, while, on the other hand, the upper classes became less fertile as the gulf between them and the lower classes widened. From a biological point of view, the highest stratum of the former bourgeoisie is the newly created nobility. And I mentioned in the beginning that I found the lowest fertility of all in this section of society.

An entirely different and in fact opposite development was in the fertility of the old nobility. This consisted of six strictly defined social strata. In its ranks, as in the other classes, the process of selection took place. Here also daughters of families with many children were moving down the social scale. The lowest stratum of the old nobility is not the lowest stratum in the upper classes. Below it comes the new nobility and the bourgeoisie. Thus, the daughters of large families, in their uninterrupted social decline, became members of the new nobility and the bourgeoisie. As there was no barrier to keep them in the lowest stratum of the old nobility, there could not be such an accumulation of very fertile persons in this section as in the lowest section of the bourgeoisie. Altogether there were many reasons which were liable to prevent social decline of members of the nobility. A member of the bourgeoisie had to rely nearly exclusively on his personal ability for the maintenance of his social position. But the social position of the nobility was dependent on inherited social prestige and frequently on wealth (consisting of land) as well as on intelligence. It is well known that, solely through the growth of

population, these estates increased continually in value, without any effort on the part of the owner. Besides, impoverished noblemen were always in a position to marry rich women from the bourgeoisie. It is well known that in this way large fortunes were continually transferred from the bourgeoisie to the nobility. All these considerations made the social decline of the daughters of noblemen extremely difficult, particularly if they were of the richer and more powerful families. The wealthier the family and the higher it was in the social scale, the more able it was to resist social decline. The ruling houses and the nobility even expressly prohibited intermarriage by means of laws concerning equality of birth. Thus the higher the stratum within the nobility, the smaller the loss of very fertile elements suffered, and in consequence we find the strange fact that the course of fertility in the old nobility was exactly the opposite of that in the bourgeoisie. For the highest stratum of the old nobility has the highest fertility, and the lowest stratum has the lowest fertility.

This whole process of change was in the main completed by the end of the War. Even if the War had not interfered, public opinion would gradually have changed in favour of the "two children system"; as it is, it became easy to convert the mass of people to this system in view of the starvation period that followed the War. Biological were thus strengthened by environmental factors. In fact, with the elimination of biological influences the forces of environment have a clear field. Towards the end of these racial changes, the more the various strata approach a stage of relative infertility, the more will their fertility be determined exclusively by environmental factors.

If the inherited desire for children is equally strong among rich and poor, or, more correctly, after these racial changes, is equally weak, then the rich may follow their inclination, while the poor of necessity must deny themselves even this modest desire. This situation is becoming apparent nowadays in Germany, where the well-to-do indeed have very few children, but nevertheless more than the poor.